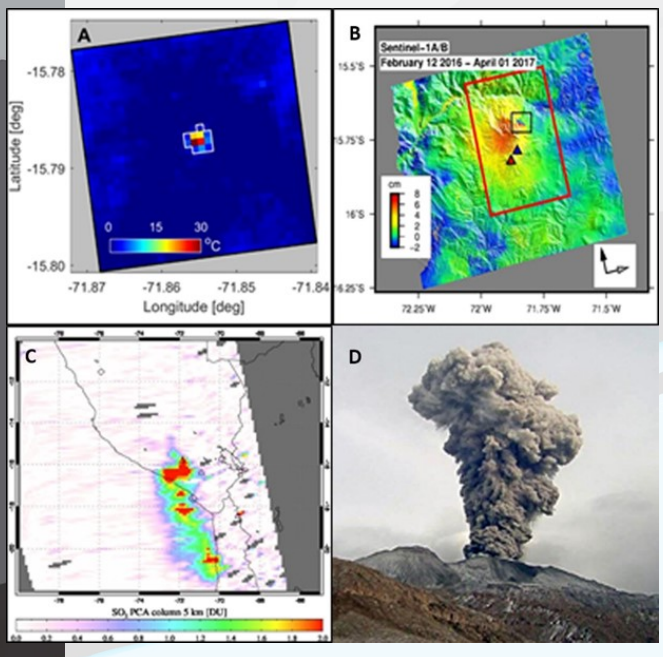
The John Wesley Powell Center for Analysis and Synthesis

OPTIMIZING SATELLITE RESOURCES FOR THE GLOBAL ASSESSMENT AND MITIGATION OF VOLCANIC HAZARDS

When: December 3rd, 2019 at 11 am MST, 1 pm ET
Where: Online at zoom.us/j/663855534

USGS Building, Reston, VA - Room 2A405
Denver Federal Center, Denver, CO - Building 810, Room 2500

By: Dr. Kevin Reath, Cornell University



A significant number of the world's active volcanoes are unmonitored by ground-based sensors, yet constitute an important hazard to nearby residents and infrastructure, as well as air travel and global commerce. Less than 35% of the volcanoes that have erupted since 1500 AD have continuous ground monitoring. Data from an international constellation of more than 50 current satellite instruments provide a cost-effective means of tracking activity at such volcanoes around the world and potentially forecasting hazards. These data span the electromagnetic spectrum -- ultraviolet, optical, infrared, and microwave (synthetic aperture radar--SAR) -- and can measure volcanic gas and thermal emissions, ground displacements, as well as surface and topographic change. Satellites offer the unique potential to globally monitor all ~1414 subaerial volcanoes with a common set of instruments that can address one of the grand challenges in volcanology -- to overcome our current biased understanding of the relation between volcanic unrest and eruption based on only a few well-studied volcanoes.

Powell Center Working Group: Optimizing satellite resources for the global assessment and mitigation of volcanic hazards

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